

Reflections From the Classroom

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Volume 11

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Foreword

CTE has a role in many different aspects of the teaching lives of KU faculty members, but our central mission is to support a community of teachers who engage their work as an inquiry into student achievement. In this issue of *Reflections* we highlight five examples of that individual work, targeted at enhanced levels of student understanding. These faculty members examined their individual courses, but they are also connected with colleagues through participation in our communities organized around teaching and learning.

All of this work is highly intentional, as these authors read and talked with each other and developed thoughtful plans for innovation. In three cases, the work was carried out over multiple semesters, representing a progression of ongoing inquiry informed by student success. In each case these reflections identify how the author made contact with the work of other scholars in their fields, getting ideas from locally visible teaching, from web-based accounts of instructional change and student understanding, and from formally published research in education and in the teaching of their own fields.

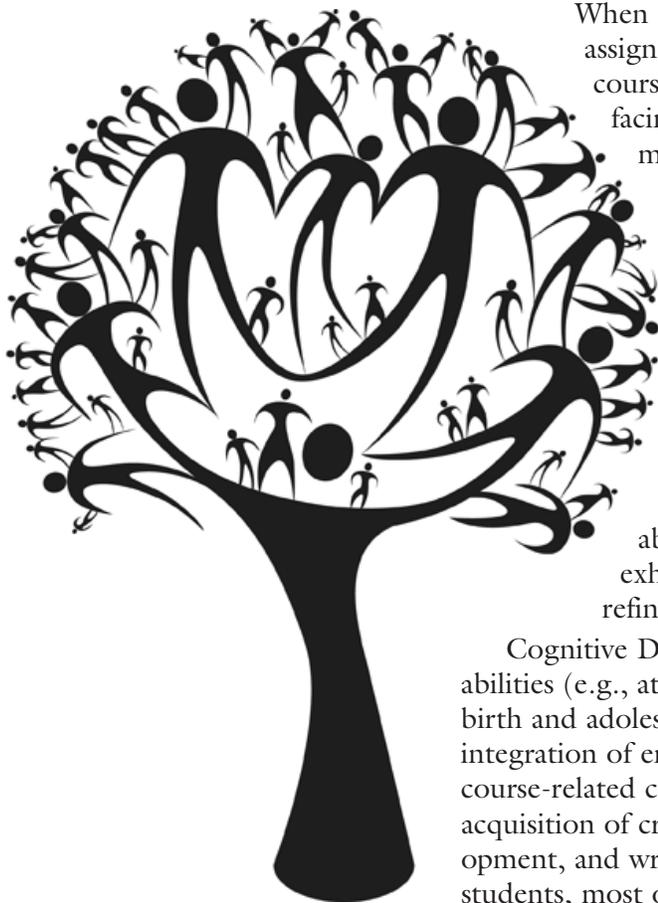
Central to each person's project is the identification of a challenge that can be studied and addressed. What first appeared as unsuccessful student performance has transformed into a motivated search for good ideas that have been shown to help students learn. The challenges addressed by these five faculty members include: building students' writing capacity within multiple genres; helping students productively read professional articles and books; helping students practice the inquiry that informs the field being taught; finding a good balance among foundational knowledge, general principles and theories, and specific uses of the course ideas; and having students make high quality professional understanding accessible to non-specialist readers and listeners. Each project represented here contributes to more than one of these goals, and each author reveals her or his path of discovery en route to enhanced learning for students.

More detailed accounts of these projects, and many more like them at KU, are found in the Gallery on our web site (www.cte.ku.edu/gallery). There are 30 interactive portfolios that make visible the instructors' intentions, innovations in instruction, student projects and writing, frameworks for judging quality, distributions of student performance, and reflections on what the instructor will do differently in the future. Another five projects are completed and are in the process of being posted in the Gallery. This issue of *Reflections* serves as an introduction to the character and quality of the work of our KU colleagues and as an invitation to read and use these observations in your own teaching. We offer many thanks to these authors and to all the others who generously share their experience with our teaching community.

Dan Bernstein
Director, Center for Teaching Excellence

The Evolution of a Term Project: Using Iterative Course Redesign to Enhance Student Learning

Andrea Follmer Greenhoot
Psychology



When I arrived at KU in the Fall of 1999, my first teaching assignment was an upper-level undergraduate psychology course on cognitive development. I soon found myself facing a challenge that is familiar to many new faculty members: how to connect with students at diverse skill levels without lowering the bar. Over the last ten years I have been making a series of iterative, adaptive changes to this course to better support the development of students' skills, and I have been tracking, more and more systematically, corresponding changes in the quality of my students' work. The results of my observations have been not only *encouraging* (students are producing more and more sophisticated work) but also *informative*—across multiple offerings I have been able to identify areas in which students continue to exhibit difficulties and target those in subsequent course refinements.

Cognitive Development focuses on the development of cognitive abilities (e.g., attention, memory, and problem solving) between birth and adolescence, with a heavy emphasis on the evaluation and integration of empirical research in the field, the application of course-related concepts to novel and meaningful settings, and the acquisition of critical thinking, information literacy, argument development, and writing skills. The course regularly enrolls 80 to 100 students, most of whom are juniors and seniors. The course fulfills curricular requirements for several majors outside of psychology, and about half of the students are psychology majors. The capstone assignment in this course is to write a paper framed as an advice column in a parenting magazine, in which students respond to a hypothetical reader question (e.g., “Will breastfeeding my baby give her an intellectual advantage?”) with practical recommendations that are based on empirical articles from the psychological research literature. The project integrates a number of the skills I want students to take away from this class: students must identify and understand psychological research, evaluate and integrate diverse research findings,

apply research findings to real-world situations, and write a clear, cohesive, and sound response to the question.

During the first offerings of this course, however, I found that students were having difficulties with each step of the term project. As a result, I have made a number of changes across multiple offerings in order to better scaffold, or support the development of, the skills required for successful completion of the project. These modifications involve breaking the complex project into multiple subcomponents, adding some additional supporting assignments, and providing guidance, practice, and feedback to students at each stage. This iterative process of gradual improvements to my course can be broadly organized into three phases, and I describe each of these in the sections that follow.

Fall 1999 to Fall 2002: Simplification & scaffolding

Because many of my students struggled with all steps of the project, my earliest efforts to improve student skills involved simplifying the project so that they (and I) could more effectively focus on each component, and increasing the level of support for each step. I began by reducing the number of articles that they were required to synthesize in their papers, and for each topic I identified and located one article to get them on the right track in their search. I required students to turn in their references early in the semester, encouraged them to submit rough drafts of their papers, and invited them to revise their final papers for additional credit. I also developed a detailed grading

rubric for the final paper and distributed it to students for them to use in editing their own work. The rubric describes four levels of mastery for each of the major components of the paper, such as the introduction and research synthesis, as well as particular features of the writing, such as sentence structure and transitions. Finally, I added in-class assignments in which the students and I collaboratively analyzed a brief research article, to guide them through the steps involved in evaluating and summarizing empirical writing.

I have made a number of changes across multiple course offerings in order to better scaffold, or support the development of, the skills required for successful completion of the project.

Fall 2003 to Spring 2006: Efforts to improve data gathering

Many of the changes I made between 2003 and 2006 targeted students' abilities to identify and evaluate empirical articles in the psychological literature. I made source identification a larger percentage of the grade on the project (from 10% to 25%), because students did not seem to be taking this part of the assignment seriously enough. I also asked them to write a paragraph explaining how the article was related to the paper topic, to prompt them to contemplate this issue as they made their article selections. Furthermore, I asked the psychology subject specialist in the KU Libraries (Tami Albin and later Erin Ellis) to conduct an in-class tour of PsycINFO, the search database for scholarly work in psychology.

These changes led to noticeable improvements in students' performance on the project. During this time period, most students selected appropriate scholarly sources, although they were not always optimally relevant to the topic. Furthermore, students were producing solid analyses and summaries of their empirical articles. Nevertheless, I was still observing some student difficulties. The in-class PsycINFO tutorial was not meeting all the students' needs, as the GTA and I were still meeting with 15-20% of the students individually to

help them find appropriate and relevant articles using PsycINFO. Additionally, students seemed to devote almost all of their efforts to the summary and evaluation of individual articles; they continued to have difficulty integrating research findings and writing coherent arguments about applications of the findings. Finally, this simplified version of the project really did not represent the level of scholarly work I wanted to see in upper-level students.

Spring 2007 to Fall 2007: Additional scaffolding & an instructional partnership

Beginning with the Spring 2007 offering I made some additional changes, which included breaking the project into additional subcomponents due throughout the semester and adding some additional smaller assignments to enhance the skills involved in the

project. But the most dramatic changes were prompted by my participation in a pilot project, coordinated by Dan Bernstein of the CTE and Jennifer Church-Duran of the KU Libraries, in which faculty collaborated with instructional partners from across campus (in my case, the Writing Center and the KU Libraries) to redesign their courses and to provide more instruction and guidance to students. At the same time, I increased the number of articles students were required to synthesize in the project, to see if I could leverage this increased assistance to challenge my students to produce a higher level of scholarly work.

Early in the semester, Erin Ellis held literature search labs in which she guided students through the literature search process in a computer instruction lab. She also offered a follow-up workshop to assist students who had additional questions about the process. To free up resources for the difficult task of article synthesis, I required students to write summaries of their articles early in the process. I then worked closely with Moira Ozias of the Writing Center to design a peer workshop in which students reviewed each others' summaries and then debated and generated collective conclusions about the implications of their research. Thus, students had an opportunity to give and receive feedback, and to see that empirically-supported answers to real-world questions are not always clear-cut. I also included additional supporting assignments that were indirectly related to the term project. For instance, students wrote two application essays using research outlined in

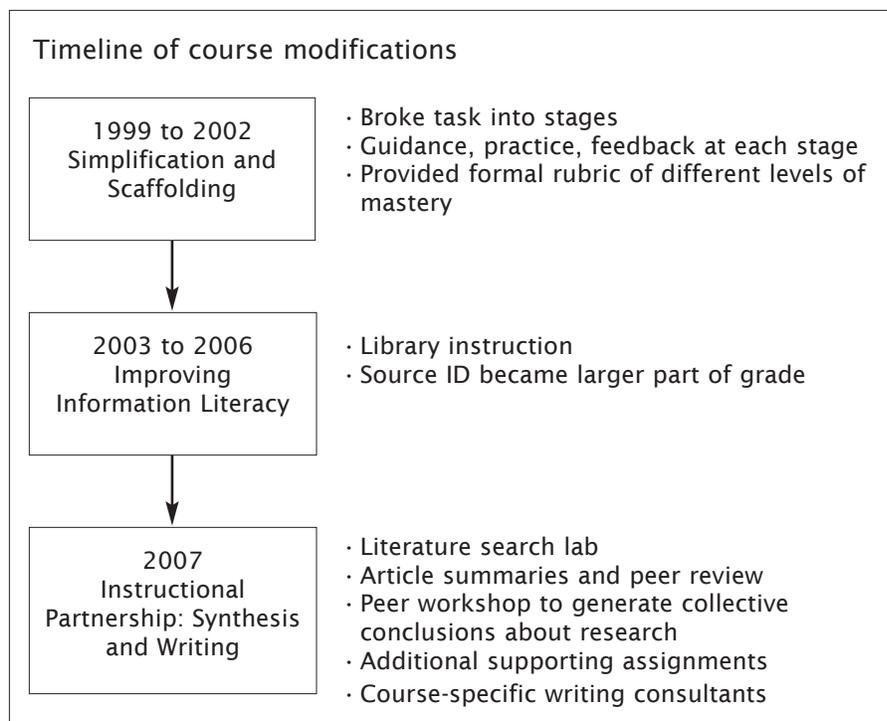
their text to address real-world questions, to gain experience in writing about the applications of psychological research. Finally, the Writing Center identified two course-specific consultants who were provided information about our assignments, and students were encouraged to work with them throughout the semester.

Results

There were several indications that these course modifications enhanced students' information literacy, critical thinking, and writing skills. After the addition of the literature search lab, not one student required individual assistance locating and selecting his or her empirical resources this past semester, and no one submitted articles from inappropriate sources (e.g., popular media). Furthermore, I was very impressed with the insightful and constructive feedback students gave each other during the peer review process; most students

provided high-level comments on their peers' writing mechanics, clarity, detail, and conclusions. The students were also very engaged in the analysis portion of the class period, and I observed several groups actively debating the implications of their research. Performance on the application essays suggests that my students may come into my class with skills in applying course material to real-world questions; more than half of the students received at least nine out of ten points on these essays.

Grades on the final paper have not changed dramatically from year to year, in part because my expectations for what constitutes "outstanding" or "adequate" work have increased with the level of support I am providing to students. However, fewer students produced very poor work (i.e., D or F papers) during the most recent offerings. Moreover, comparisons of actual student products from year to year illustrate that the papers, particularly



the A papers, were clearer and more sophisticated during the most recent offerings than they were during previous semesters. In particular, following the third wave of modifications, I observed a much improved ability to synthesize diverse research findings and draw appropriate conclusions. The typical synthesis in pre-2007 semesters consisted of relatively shallow comparisons between the methods and results of the studies. In contrast, many students in the most recent cohort identified multiple points of contrast between studies and revisited these contrasts at the end of the paper to show how the findings build on each other and have different, but interrelated, implications for the real-world issue. This change is especially noteworthy given that students were required to synthesize more research findings than in earlier semesters.

Reflections

I am very happy with students' improved information literacy skills and the increased level of synthesis after the most recent phase of course modifications. Student work is more closely approximating the types of upper-level work that I think should be exhibited. Furthermore, the students seemed to really enjoy and appreciate the staged approach to the term project. However, there are still areas that need further refinement and exploration. One issue is that the writing consultants were not heavily utilized; only about 10% of the students visited a writing consultant during the most recent course offering. I would also like to increase the sophistication of student prod-

ucts, by further increasing the number of required sources and encouraging students to provide more concise discussions of empirical research that resemble those found in a typical literature review. Finally, although the instructional team approach was highly effective, this design may not be practically applied to a large number of courses. I am currently working with Dan Bernstein, Jennifer Church-Duran, Mariya Omelicheva of political science, and Terese Thonus from the Writing Center to develop and evaluate a *sustainable* instructional team approach. The new approach involves training graduate students (supported by a small stipend) by apprenticeship with the Libraries and Writing Center, to provide some of the course design and hands-on student support previously provided by the units themselves. What is especially exciting about this approach is that we are creating a valuable training opportunity for future faculty while simultaneously upgrading the learning support to our undergraduates.

Fitting teaching inquiry into professional life

My current approach represents an accumulation of many small changes that I have made across several years of teaching and "tweaking" this course, and this has made the course refinement process quite manageable. There are several additional features of the course modifications that have helped to keep the workload at a reasonable level (in addition to being intellectually valuable to the students). First, like any form of planning, the development of grading rubrics

involved an early investment of effort that has more than paid itself off by reducing the amount of time the GTA and I spend evaluating papers and writing comments. Second, the peer collaboration workshop provided students with feedback on an additional assignment without requiring an additional evaluation step for the GTA and me. Finally, partnering with other units on campus enabled me to significantly increase the resources and support available to the students without a significant increase in my own (or the GTA's) workload.

All in all, the iterative and gradual process of course redesign that I have described here has produced continuous upgrades in my students' work with relatively low "risk" and low "cost." The instructional partnership and scaffolding have been particularly successful in getting more students to perform well on a more challenging assignment. The next logical question is whether Cognitive Development students are able to generalize writing, critical thinking and application skills developed in this course to other courses as well. Perhaps I will have the data to answer this question in a few years....

For more information about Prof. Greenhoot's work, see her course portfolio at www.cte.ku.edu/gallery/visibleknowledge/greenhoot.

From Novice Toward Expertise: Movement on the Continuum



Bonnie J. Johnson
Urban Planning

In Spring 2007, I taught UBPL 735: Site Planning for the first time. Site planning is the process someone uses to determine where building(s), landscaping, sidewalks, parking lots, and signs go on a particular piece of property. For planners there is an emphasis on designing sites that balance the economic, ecological, and cultural values of a community. Each individual property in a city is part of creating the whole. Planners review site plans to make sure each property contributes positively to the whole.

The course is one of the methods courses in the master's of urban planning graduate program. Students in this program specialize in environmental planning, housing and development, land use planning and urban design, or transportation. Each area of concentration takes students through a sequence of classes that covers theory and policy, methods, and implementation. UBPL 735: Site Planning is one of the methods courses in the land use planning and urban design specialization. It is a fairly new course in our program, since we have long been known as a "policy" program rather than a physical planning (building or city design) program. However, while we continue an emphasis on policy, over the years we have

gotten feedback from our alumnae that applied skills like site planning are needed on the job. As a result, UBPL 735: Site Planning has been offered for the last several years.

The first time I taught the course, I had 11 planning students and one student each from law, engineering, and architecture. Because my experience with site planning had been as a professional planner, my greatest challenges were remembering what it was like to be a novice and helping students develop their skills on the way to becoming expert site planners. This class proved to be difficult for me and for students, partly due to an assignment structure that focused on discrete skills without allowing students to see the site planning process as a cohesive whole and not allowing enough time for practice. A range of technical skill levels also made learning software programs like Photoshop difficult.

To better understand site planning and what makes an expert, I interviewed ten landscape architects. Landscape architects create site plans from scratch, while city planners review plans for compliance with city codes. I asked the landscape architects what an expert site planner looks like, what skills an

expert has, and what skills they see lacking in city planners they have worked with in meeting city site planning regulations. One interviewee pointed out that city planners may not need to be able to create a site plan, but they do need to be able to recognize a good site plan from a bad one. While doing these interviews, I quickly discovered that learning site planning takes landscape architects years of education and on-the-job training to master.

My attempt to teach all someone needed to know about site planning in one semester was doomed from the beginning and not necessarily what city planners needed. Instead of attempting to create professional site planners in one semester, I followed the advice of one landscape architect and decided to train professional “site plan analysts” who have an appreciation for the mechanics of site planning and an appraising eye for site design.

Learning goals

One of the goals for the course is to develop an appreciation for the process of site planning (see Figure 1 below). A good process

brings together how the client wants to use a site (programming) with the site’s carrying capacity (inventory of biological and physical assets and limitations) and a city’s goals for future development (cultural inventory). While city planners may not need to create a site plan from scratch, they do need to appreciate what goes into a quality plan and understand how a designer got to his or her final product. By knowing the proper process, a city planner can see where a designer gave inadequate thought, such as inventorying existing trees (biological inventory), or see where a designer took particular care, such as using building materials similar to historic buildings in the area (cultural inventory).

The second goal involves being able to spot a good or a bad site plan. To do this, students should be able to answer the following questions using the eye and language of a designer:

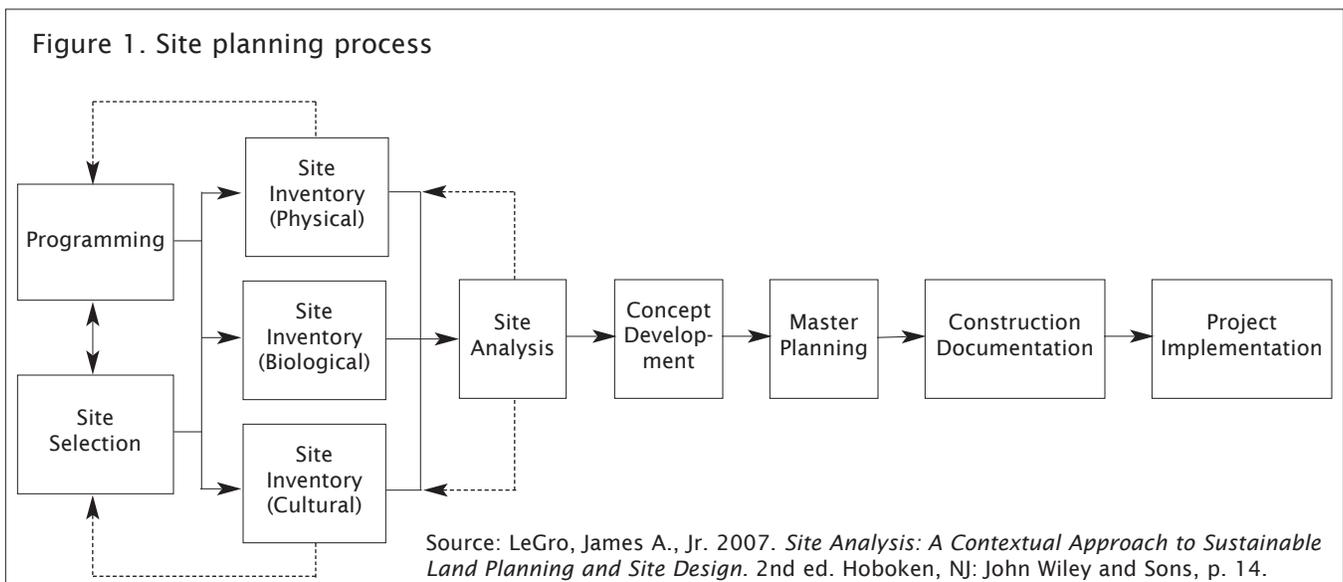
1. What makes great places?
2. What makes great neighborhoods?
3. What makes great streets?

I took the three questions

from an initiative by the American Planning Association (APA) (the professional organization for city planners) that honors different locations across the U.S. because they are great places, great neighborhoods, or great streets. I thought these were timeless questions that site analysts should be able to answer. These questions are purposely broad and allow opportunities for a range of technical and aesthetic exploration.

After I decided on the two overarching learning goals, I looked for ways of organizing the course and setting priorities. I wanted to keep in mind differences in thinking between novices and experts and how I could help students move toward expertise. I turned to the book *Teaching for Understanding*, edited by Martha Stone Wiske (1998). In Chapter 6, “What Are the Qualities of Understanding?” Veronica Boix Mansilla and Howard Gardner describe four dimensions of understanding: knowledge, methods, purposes, and forms.

Mansilla and Gardner’s framework defines each dimension



along levels of understanding from naïve to master. The “knowledge” dimension focuses on moving beyond intuitive beliefs and developing the ability to move back and forth between specifics and generalizations. “Methods” refers to a healthy skepticism about knowledge and the ability to confirm or disconfirm assertions. The dimension of understanding labeled “purposes” takes into consideration how knowledge is accumulated and its multiple uses and consequences. “Forms” includes how knowledge is demonstrated within different contexts. The form can be written, verbal, or graphic (Mansilla and Gardner 1998, 173–8). At a naïve level, students do not take ownership of their knowledge, and novices simply mimic what they have read or been told. Apprentices begin to show how they can apply their knowledge in new ways while masters are highly flexible, creative, and cognizant of different worldviews (Mansilla and Gardner 1998, 180–1).

Core competencies & assignments

Using Mansilla and Gardner’s framework and the interview results, I organized the course around five core competencies. I wanted students to be able to:

- Observe the world around them
- Understand the site planning process
- Experience basic design principles
- Use context
- See different viewpoints

Table 1 (p. 10) shows how course assignments, topics, and guest speakers fit within the teaching for understanding

framework. Starting with the framework, I placed topics, assignments, exercises, and guest speakers from the syllabus into the table to make sure I was staying on track.

The major project for the course was creating a conceptual site plan. This is not a final site plan which would require learning AutoCAD software and much more training than one semester would allow. Over the course of the semester, I assigned manageable pieces of the project that guided students through the process of creating a site plan culminating in a completed poster. Students were working for an actual client (Camp Shalom, a campground and religious retreat in Linn County, Kansas) who would use their posters to decide how to improve and add to their facilities. The assignments followed the steps in LaGro’s diagram (see Figure 1 on p. 8):

- Assignment 1—Complete a programming description (how the site will be used and by whom)
- Assignment 2—Site inventories/analysis (soils, steep slopes, views, local regulations)
- Assignment 3—Concept development (building and landscaping materials)
- Assignment 4—Concept development (showing improvements on photo of site)
- Assignment 5—Draft concept
- Assignment 6—Final poster incorporating all previous assignments

Students brought the steps together in a final conceptual site plan poster and also applied what they learned from their analysis of a housing development in Lawrence using the “great places” questions. In this man-

ner, their final projects brought together the two overarching learning goals for the course (the process of site planning and what makes a good site plan).

Learning poster design aimed to enhance students’ visual communication skills but also introduced them to basic design concepts: clear hierarchy, organizing structure, typography, white space with a purpose, far away and up close, color with a purpose, and triangulation. This tied into the “forms” dimension of understanding which emphasizes “effective use of symbol systems” and communication. I also wanted the process of working with a client and producing a conceptual plan of their own to accomplish other goals embedded in the framework for understanding such as “consideration of audience and content” and demonstrating knowledge.

Grading

For each of the assignments, grading rubrics were created based on criteria from either LaGro or the classic book *Site Planning* by Kevin Lynch and Gary Hack, along with the teaching for understanding framework. Because the take-home exam focused on the use of design criteria, practicing mastery of the performance genre of writing, and demonstrating awareness of the purposes of knowledge, the rubric for the exam focused on how the “great places” criteria were used, the quality of writing, and how well students conveyed to their readers why the criteria was important. The rubrics for pieces of their final project like the programming description and site analysis used established criteria

Table 1. Class topics, skills, and assignments inserted from syllabus

Four Dimensions of Understanding			
Knowledge	Methods	Purposes	Forms
A. Transformed intuitive beliefs	A. Healthy skepticism	A. Awareness of the purposes of knowledge	A. Mastery of performance genres
Connecting common sense with the discipline—Intuitive beliefs are questioned, but they inform the discipline.	Can understand that knowledge constructed by humans and see how one can ask too much of single methods.	Look for why this knowledge is important and why it is important in people’s lives.	Can move easily through different means of communication and create new protocols when needed.
What makes great places? What makes great neighborhoods? What makes great streets? <ul style="list-style-type: none"> - Start semester by asking students to answer these questions. - Have readings & classes on each question. - Ask students questions again at the end in a take-home exam. - Ask students to explain why their design creates a great place. 	Engage experts from allied professions: engineering, landscape architecture, ecology, architecture, and experience of a practicing planner. <ul style="list-style-type: none"> - Guest speakers from each profession engage students and advise students on their projects. Engage experts in what makes art & design of posters for visual communication. <ul style="list-style-type: none"> - Use art museum resources. - Guest speaker on poster design. Poster expert returns to critique posters. 	Use examples of great places, great neighborhoods, and great streets. <ul style="list-style-type: none"> - Look at APA award winners. Use site planning process to understand its logic and why it is useful. - Break final project into pieces and allow for practice and feedback. - Practice site design in class. 	Learn written and visual communication skills. <ul style="list-style-type: none"> - Create programming description handout. - Learn how an artist sees the world and practice drawing skills in low pressure manner. - Learn Photoshop and InDesign software. - Engage expert in poster design.
B. Coherent and rich conceptual webs	B. Building knowledge in the domain	B. Uses of knowledge	B. Effective use of symbol systems
Can move easily from specifics to broader generalizations.	Use of professional methods in a variety of ways or in new, upper level ways.	Realizing multiple uses & that they can create new uses. How to “see” the world through discipline’s lenses.	Can use symbols as effective communication tools and can use them in creative ways when needed.
<ul style="list-style-type: none"> - Focusing on the “great” questions. - Looking at APA award winners. - Going through the design process in class (Fig. 1). - Breaking design process into assignments. - Having guest speakers on each step of the design process. 	Model professional behavior. <ul style="list-style-type: none"> - Guests from allied professions. - Landscape architects show how to do a site analysis & a conceptual design. Practice professional behavior. <ul style="list-style-type: none"> - Assignments correspond with design process. - In-class exercises give experience with meeting site design challenges. 	Using technical knowledge in creative ways. <ul style="list-style-type: none"> - Taking expert and technical information and combining it with design principles. - Seeing examples of final designs and how they evolved out of site analyses. - Applying artistic design principles to actual sites. 	Learn site planning symbol systems. <ul style="list-style-type: none"> - Importance of scale and north arrow. - Exposure to penmanship of design. - Use of symbols in art. - Exposure and practice use of symbol system used by site designers. - Reading topography maps.
	C. Validating knowledge in the domain	C. Ownership and autonomy	C. Consideration of audience and context
	Use of multiple methods of validation which are open to change.	Students feel authorized to use their knowledge and see consequences from different points of view.	Effective communication entails taking different views into consideration & good listening. Can use context to enhance communication.
	Seeing the world through allied professions. <ul style="list-style-type: none"> - Using knowledge from different experts in site design. Understanding client needs and wants. <ul style="list-style-type: none"> - Working with actual client on real-world project. 	Applying new knowledge. <ul style="list-style-type: none"> - Use of experts’ knowledge in final project. - Use of client wants and needs in final project. - Use of artistic and poster design knowledge in final project. 	Understanding biological, cultural, and physical attributes of sites. <ul style="list-style-type: none"> - Practice in class. - Use in assignments and final project. - Engage allied professions. Understanding context. - Listening to client. - Visiting the site. - Doing a site analysis.

Based on Tables 6.1–6.5 (Mansilla and Gardner, 1998, 184–96)

from readings and lecture to help students develop knowledge in the domain and mastery of performance genres. The rubric for the culminating assignment, the conceptual site plan poster, explicitly used the framework for understanding and evaluated how much students moved on the continuum from naïveté toward expertise (Table 2, p. 12).

Meeting overall goals

On the first day of class I asked students to answer three questions: What makes a great place? What makes a great neighborhood? And, what makes a great street? At the end of the semester, I compared their answers from the first day to answers on the take-home test where they were asked to apply APA criteria to a new housing development in Lawrence. At the start of the semester, on what makes a great neighborhood, students wrote:

- Sense of community
- Walkability
- Diversity of land uses
- Parks and green spaces
- Different architecture
- Nearby store, restaurants, etc.
- Pleasing to the eye
- Comfortable
- Unique
- Good school
- Peaceful road traffic

In their take-home tests they wrote the following:

- “According to Hinshaw (2008:6), ‘great neighborhoods offer many choices, they accommodate change gracefully, and they are socially and economically inclusive.’ However, the neighborhood gives you an impression that you are in an enclosure. The gate at the main entrance to this neighborhood portrays a

sense of seclusion and segregation. The neighborhood thus limits diversity by excluding groups based on income (price discrimination).”

- “With regards to the character of the neighborhood, clearly great efforts were made in both planning and designing the development to reflect the rural character of the area as well as the site’s agricultural past. This can be seen in many of the buildings’ gambrel style roofs which mimic the styling of certain barns in addition to the presence of windmills and other such farm staples throughout the site. However, this would-be memorable design becomes muddled with the inclusion of other architectural designs which appear to be more typical of the large houses on small lots found in many subdivisions.”
- “The single-family houses are all of similar mass, architectural style and height, and the multi-family dwellings build a sense of monotony by repeating the same building style of a two bedroom unit and a three bedroom unit.”
- “Biking and walking trails connect residences, but do not provide a link to other necessities like grocery stores or coffee shops, for example.”

Students did move further down the road to expertise. In their take-home exams they were able to describe what it was they liked or did not like about the “different architecture,” realizing that height, style, and mass play roles. Students also were able to delve deeper into concepts like “comfortable” by seeing the pros and cons of a gated community. Also, “walkability” became about

“connections,” not just a sidewalk. Yet, the responses do seem to be at the apprentice stage of understanding with the ability to use criteria but not to create new criteria or “own” the criteria like an expert. Students are also at the novice stage in terms of a healthy skepticism, as they may find it easier to be hypercritical rather than more discerning.

When students displayed their posters, I went around the room and each student gave a short presentation about his or her design. I asked each one, “What makes this a great place?” I was disappointed that only one or two could answer. Students were able to apply criteria in the take-home exam, but they could not “own” it or internalize it in relation to their own work.

Students created posters illustrating design themes for their final conceptual site plan posters. This interim step was intended to allow students to practice poster design and become familiar with InDesign software before the high-pressure assignment at the end of the semester. Before this first poster was due, an expert on poster design visited class and showed examples. Students’ theme posters were disappointing, because they were so abstract that clients and other observers had no way of understanding their messages. They had forgotten to consider audience and context. The posters needed to be stand-alone pieces that would communicate students’ messages even when they were not around to explain themselves. In the end, the final posters were better communication tools and showed students’ progress toward effective communication and use of symbols.

Reflections

The Spring 2008 semester went much more smoothly than the previous time I taught the course. There are still areas to be improved in terms of timing and focus, but those are much easier to handle with an overall framework in hand. The “teaching for understanding” framework is very useful for establishing priorities and keeping assignments and classes on track. Site planning is a huge subject that could consume several semesters. To get the most out of students’ time and attention, focus is paramount, and that is where the framework is most useful.

In Spring 2007, before I implemented these changes, a landscape architect visited my class and she walked students through an exercise in laying out a drive-through bank site in an inner-city setting. After the class, the landscape architect said, “Those were not designers.” By

changing the focus of the class from teaching design to teaching site analysis, the learning goals became more realistic and on target for ultimately creating good site plan reviewers who know a good plan from a bad plan.

As a new teacher, it is hard coming to terms with the fact that no matter how hard you work or how good your intentions, classes will not be perfect right from the start (or the second or third or fourth time ...). This class has been particularly frustrating in terms of deciding what to leave in and what to leave out. I settled on priorities, and then came the work of practicing how to present and explain information. The framework for understanding helped with the priorities and with thinking through “how” to teach so students could leave the class with more expertise than when they entered. I now feel much more comfortable with my focus in

this course. I look forward to more practice and perfecting the course as I move further down the continuum from novice to master site planning teacher.

References

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For more information about Prof. Johnson’s work, see her course portfolio at www.cte.ku.edu/gallery/visibleknowledge/johnson.

Table 2. Conceptual site design poster rubric (based on Four Dimensions of Understanding)

Knowledge	Methods	Purposes	Forms
<p>A. Transformed intuitive beliefs Connecting common sense with the discipline—Intuitive beliefs are questioned, but they inform the discipline. -Answer question: What makes this a great place? -Compare to answer given at start of semester; should inc. use design principles, APA criteria</p>	<p>A. Healthy skepticism Can understand that knowledge constructed by humans & see how one can ask too much of single methods. -Handout of program description -Poster includes text & visuals -Use of hand drawing & computer representation -Poster accessible to avg. person</p>	<p>A. Awareness of the purposes of knowledge Look for why this knowledge is important & why it is important in people’s lives. -Poster communicates this message to client & viewers</p>	<p>A. Mastery of performance genres Can move easily through different means of communication & create new protocols if needed. -Uses Photoshop & InDesign in creative ways -Uses drawing skills -Handout coordinates with poster in content & appearance</p>
<p>B. Coherent, rich conceptual webs Can move easily from specifics to broader generalizations. -Poster uses design principles: hierarchy, organizing structure, typography, color, triangulation -Shows where ideas originate -Site design based on program description & site analysis</p>	<p>B. Building knowledge in domain Use of professional methods in various ways or new, upper level ways. -Creative use of Photoshop, InDesign -Poster “breaks the grid” -Overall design achieves a “sensed quality”—engages all 5 senses -Site design uses technical information in artistic ways</p>	<p>B. Uses of knowledge Realize multiple uses & can create new uses. How to “see” the world through the discipline’s lenses. -Design principles for art evaluation used in site design -Design principles for posters used -Design takes into consideration advice from allied professions</p>	<p>B. Effective use of symbol systems Can use symbols as effective communication tools & use them in creative ways when needed. -Uses established site design symbol system -Uses own logical symbol system when needed -Uses proper scale & north arrow</p>
	<p>C. Validating knowledge in domain Use of multiple methods of validation which are open to change. -Answer to great place question uses different kinds of resources (examples, has tactile quality & human scale)</p>	<p>C. Ownership & autonomy Students feel authorized to use their knowledge & see consequences from different points of view. -Site design is creative but still meets client’s needs -Site design draws on advice from other allied professions</p>	<p>C. Considers audience & context Effective communication considers different worldviews & involves good listening. Can use context to enhance communication. -Shows student listened to client -Design in tune with cultural, biological, physical context of area -Programming inc. government regulations & uses expertise of other allied disciplines</p>

Small Changes, Big Results: Incorporating Public Speaking into an Engineering Course



Steven Schrock
Civil, Environmental and
Architectural Engineering

One of the courses I teach is CE 582, Highway Engineering. This is an upper-level design elective taken by students who are in the general civil engineering track. The students enrolled are typically seniors within one or two semesters of graduation, although juniors and graduate students may enroll, as well. CE 582 is meant to prepare students for professional careers at state departments of transportation, city traffic engineering departments, or private consulting firms that perform transportation engineering services.

This course is the only undergraduate course in transportation engineering offered at KU. As such, it contains all the components of an engineering design course, such as learning and using computer-aided drafting software. However, students also must be taught highway engineering fundamental principles before they can get to the design project. Specifically, course goals include the following:

1. Develop an appreciation of highway engineering as a profession
2. Develop an appreciation for the planning, design, and operation of highways

3. Introduce skills of current software used by highway agencies
4. Develop teamwork skills among students
5. Foster a professional attitude
6. Help students develop their written and oral communication skills

The vast amount and nature of the course material pose an interesting dilemma: How do I balance the time I spend teaching both the fundamentals and the design-specific content? In addition, these two portions of the course seem to have different default approaches to student learning. Students are typically exposed to engineering fundamentals by listening to lecture material and working through computational homework problems. By contrast, learning design project material requires practicing hands-on computer lab work, technical writing, and presentation skills. Students typically have varied levels of proficiency in these skills, depending on their previous coursework or work experiences.

Because most students are close to completing their undergraduate programs, I believe that it is also one of my duties to

begin to prepare students for the expectations of a professional career and employment. One of the skills I consider extremely important for engineers is the ability to effectively communicate technical material in an oral presentation. In fact, the Accreditation Board for Engineering and Technology (ABET) evaluates the KU School of Engineering in part on how well we impart the following abilities to our students:

1. The ability to use techniques, skills, and modern engineering tools necessary for engineering practice
2. The ability to identify, formulate, and solve engineering problems
3. The ability to work in a team
4. The ability to communicate both orally and in the written word
5. The ability to understand the social and political impacts of engineering decisions

When I taught this course in 2006, I required students to work in groups to complete a project design for the Lawrence bypass. Each group worked on the same problem but generated different solutions. Their final assessment was a group presentation made to a board of professional engineers. Students were asked to present their project as if they were proposing their design to potential employers. Although a few groups performed well, overall I was disappointed in the quality of the presentations. Their engineering proposals were of extremely high quality, but in general, the slides and public speaking skills were low to mid-quality.

My teaching goal in 2007 was to help students improve their

technical presentation skills without sacrificing learning the conceptual and technical fundamentals of highway engineering. In short, I wanted to add presentation skills to my curriculum without losing any of the content I normally cover. Specifically, the skills I aimed to help students develop included:

- Effectively conveying information on PowerPoint slides
- Eliminating physical distractions while publicly speaking
- Being prepared to defend design decisions orally (articulately and convincingly)

I didn't alter the number of assignments from previous semesters; I just enhanced existing assignments to include dimensions of public presentation.

Final project & teaching plan

Both times I taught the course, the goal of the final project was to have students work in teams to solve a real engineering design problem and present their design to a panel of professional engineers. There were two assessment components: the oral presentation to the panel and a written report that described the decision-making process groups underwent during the design process. The project—written and presentation components together—was worth 20% of their final grade. All students in a group received the same grade.

For the oral presentation, I assessed students on their ability to stand in front of an expert panel of professional engineers, present their design project, defend their design decisions, and in essence, convince the panel that their proposed design would be an efficient and effective

improvement for the public good. Ideally, I would like the students to talk about their project with confidence and good public speaking techniques, have effective PowerPoint slides, and have a strong knowledge-base for answering tough questions from an audience or panel.

During the Fall of 2007, I changed several aspects of my course in an effort to improve my students' public speaking abilities. Specifically, my goal was to better scaffold the final presentation to increase the quality of the final project; to do so, I

aimed to make my expectations for high-level performance clear through a series of practice assignments. Because I didn't want to sacrifice engineering content or course time, many of the changes were amendments to assignments I used previously, only I required students to spend some extra time outside of class developing their presentation skills. Thus, I didn't alter the number of assignments from previous semesters; I just enhanced existing assignments to include dimensions of public presentation. My goal with these small assignments was to have students gradually build their skill sets and, over time, internalize the traits associated with high performance. If students could identify the characteristics of high-level work and also how to achieve it, I expected they would integrate their knowledge and perform at a high level on the final project.

Improving presentation skills

First, on an early homework assignment, I asked students to provide me details about their public speaking background. In particular, I asked them to reflect on their experiences preparing and giving presentations out of the context of a classroom, as well as evaluate their performance and comfort in those presentations. This survey stemmed from frustration I experienced during Fall 2006 when I incorrectly assumed that because all students had completed the required speech and communications course, that they would have the tools to be effective public speakers. I hoped that by assessing their prior knowledge and their comfort levels, I could better respond to the needs of individual class members.

Next, I shared with students a video titled “Talking Science” that humorously illustrates right and wrong ways to give a professional science presentation [http://wrigley.usc.edu/spotlight/talkingscience_video.html]. While the video was an exaggerated look at what speakers can do wrong, I found that watching it opened a dialogue among my students. Indeed, relative to my having lectured on the same topic by enumerating lists of no-no’s (e.g. gum-chewing, etc., as I had the previous semester), the video invoked responses and spurred discussion among the students that ultimately covered the same material I would have covered in a lecture.

To teach visual presentation skills, I chose to amend existing assignments so that I could build their PowerPoint skills without students having to go out and research new topics or add other

work that the students would see as “more for the sake of more.” For example, on one homework assignment I required students to present their problem solutions as PowerPoint slides. I then selected slides that demonstrated various levels of performance and showed them to the students (the author remained anonymous), encouraging discussion regarding the strong and weak aspects of each. In addition, I selected slides from the final presentations from 2006 and had students assess those, as well. By the end of the class session, they seemed to have a strong sense for what made a good visual presentation with PowerPoint.

Finally, I gave extra credit for students attending transportation-related presentations outside of our class environment. In addition to having them summarize the content of the presentation, I also asked them to evaluate the speakers for their presentation skills. I hoped this would help them internalize and ultimately adopt the public speaking skills they found effective as audience-members. About half the class opted to do this extra credit assignment.

The final presentations: Nuts & bolts

To designate groups, I gave the students position announcements that described specific roles that a member would play in the group. For example, one of the positions was for Team Leader, whose tasks—among other things—included emailing me with an update each week describing the progress of his or her group. Once students prioritized their preferred positions, I designated the Team Leaders,

provided them the information on student requests for positions, and had them assign members to their teams based on student preferences. This way, students were not forced into any particular team role and could choose a position that capitalized on their strengths.

I made it clear from the beginning that students in the same group would all receive the same grade. My justification for this is that in professional engineering environments, a product reflects the work of a design team, regardless of the distribution of input among members. Thus, the group grade reflects real-life work scenarios.

For Fall 2007, I developed explicit grading criteria (see page 16) to evaluate design presentations, and I shared this with students early in the semester so they could see what traits comprised a superior performance. As a class we developed expectations for the deliverables (i.e., design sheets). While these traits weren’t formally included in a rubric, the fact that the students themselves determined the nature and quality of acceptable work made expectations clear to everyone.

I believe that one of the most crucial aspects of project preparation is devoting class time to addressing student questions and issues. Each class period I devoted the last five to ten minutes to discussing the class project; at this time I answered questions and checked in on the students’ progress. I also reserved several lectures as “open” lectures. Because the project is different each year and students encounter different topical challenges, as a class we periodically rearranged

the syllabus so that I could teach the material they needed to complete their project designs. In this way, students identified what they needed to know to solve problems, prioritized it, and took some responsibility in re-ordering the class material.

Final presentations took place in November 2007. The committee of professional engineers was comprised of nine registered professional engineers:

- Two transportation engineering faculty from the CEAE department at KU (same two as in 2006)
- One graduate research assistant for the class (same as in 2006)
- Three managing engineers from the Road Design Bureau

of KDOT (same three as in 2006)

- Two engineers from Kansas City area engineering consulting firms
 - The assistant director of public works for the City of Lawrence
- After each presentation, the presenting group fielded questions from the panel. In addition, each panel member provided written comments.

Results

When I surveyed the class to assess prior experience with public speaking, many students in my Fall 2007 class expressed apprehension at the idea of a public presentation. This reinforced my desire to implement

scaffolding activities to build students' skills—and therefore confidence—for their final projects.

I introduced students to quality slide-making by having them create PowerPoint slides as their format for handing in a typical homework assignment. The quality of slides I received varied widely, and I was able to select slides that would be graded A, B, C, or D and compare them during a class lecture. I asked students to pick out positive and negative aspects of each slide.

The extra credit assignments did not elicit as much reflection on speaker performance as I'd hoped. However, students who attended the extra seminars and made an effort to describe the

CE 582 Fall 2007
Schrock

CE 582 Design Project Grading Sheet

Group members:

Presentation:

Grade	Value	Criteria
	20	Spelling, neatness, etc.
	10	Grammar, sentence structure
	25	Effective use of PowerPoint slides, handouts
	15	Effective use of presentation time
	10	Effective participation of all team members
	20	Ability to answer questions
	100	Total

Written Report:

Grade	Value	Criteria
	20	Spelling, neatness, etc.
	10	Grammar, sentence structure
	20	Formatting—consistent use of headings, appropriate presentation of tables and figures, effective use of tables and figures, etc.
	20	Completeness—all necessary calculations shown either in document or appendices
	10	Comprehensive discussion of design decisions
	20	Insight—additional work beyond satisfying the minimum requirements of the design project
	100	Total

Comments:

strengths of the speaker were given full credit for their effort.

The quality of student presentations in both 2006 and 2007 was very high. In the end, I gave all student groups an A grade. The most marked improvement I observed in my 2007 class compared to 2006 was in the quality of the PowerPoint slides. The feedback from outside panel members attests to the strong presentation skills demonstrated by individual students, as well as the collective effort of the group.

Reflections

Making a number of small changes to improve presentation skills paid off; overall my 2007 students were better public speakers, and their visual presentations, in particular, improved markedly. Consequently, I plan to retain the additions I made to my course (i.e. the video and the PowerPoint assignment).

Given the high quality of class discussions following the “Talking Science” video, I was disappointed that students did not respond to the extra credit assignment with as many in-depth observations as I’d hoped. My sense was that students seemed to feel uncomfortable criticizing the speakers. Next time I teach the course, I will create a rubric (or use the same rubric I use to grade their presentations) for students to use when assessing speakers; this way, student discomfort can be alleviated because they can assess the presentation’s quality using objective criteria. Similarly, I would like to have students watch a video of one of the student presentations from the previous year and have them grade it using my rubric. Using these

rubrics before they make their own presentations will hopefully help students more effectively internalize the qualities of excellent oral presentation.

One reason why I saw more dramatic improvement in the visual presentation skills compared to the oral presentation skills may be that students were able to practice their PowerPoint skills in the small assignments during the semester. By contrast, although I’d had students critique (as a class discussion) the “Talking Science” video, I did not create additional opportunities for them to practice their oral communication skills. In the future, I hope to devise a way to incorporate practice speeches into the semester.

Overall I was impressed how just a few small changes could improve student presentations. Combining a few assignments explicitly devoted to improving presentations—along with an overall awareness by students of the importance I placed on good presentation skills—helped students internalize the characteristics of high quality work. Importantly, I do not feel that any content was sacrificed, largely because I did not create more work; rather, I accentuated the presentation dimensions of existing assignments. Furthermore, I was able to emphasize to students the importance of public speaking to their professional success by devoting class-time to skill-building, as well as having professional panelists critique their performance.

For more information about Prof. Schrock’s work, see his course portfolio at www.cte.ku.edu/gallery/visibleknowledge/schrock.

Mapping Change: Using Inquiry in the Literature I Survey

Sonya J. Lancaster
English

When I wrote a proposal describing the course I wanted to redesign for a CTE Faculty Seminar, I described my goals for the English 320: American Literature I survey in the following way:

In the survey courses for English majors, there is a temptation to lecture to students and tell them what they need to know about each period so that they can place pieces of literature into a broader context. I want students to be more active in their learning, and I want to use the opportunity of exposing them to texts from a period they often know little about (American literature from its beginnings to 1860) to show them how literature responds to historical and cultural situations. I want students to make connections in the course and analyze them, rather than have me make connections for them.

I know that students need more help making these connections, because their evaluations of this survey course reflect confusion over how it all fits together. I need to find a way to help them make sense of the literature of these periods.

All of these goals demonstrate students' need to practice inquiry, to learn to pose interest-

ing questions about what they read, and to be open to exploring those questions through discussion with each other and research. This is an account of my attempts to navigate change in my teaching and to chart the effectiveness of the changes in my students' work.

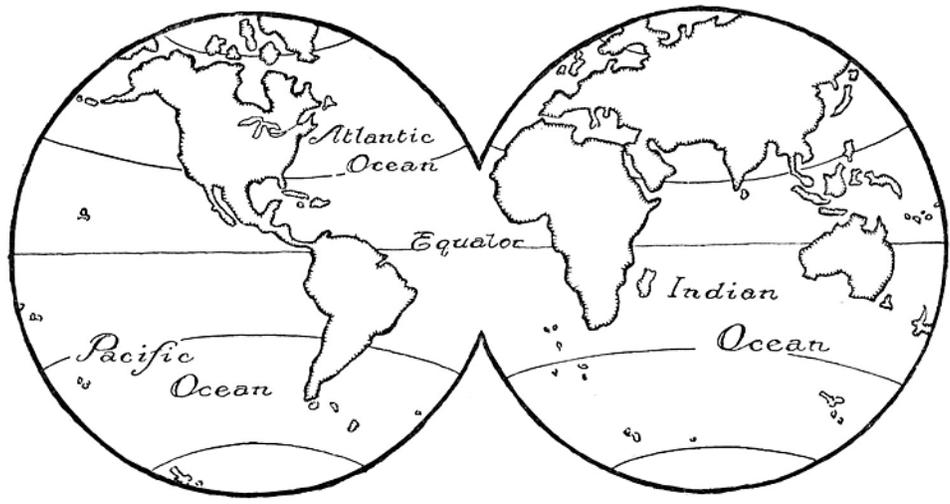
“Here Be Dragons”—Found on many ancient maps to indicate uncharted & potentially dangerous places
ENGL 320: American Literature I Survey is the first of two American literature surveys, and it is required for all English majors. The class is ordinarily made up of English majors who are focusing on literature; those with a creative writing interest; secondary education majors with an English emphasis; and students who are majoring in theater and film, journalism, or other Arts and Sciences majors. The class typically enrolls 35 students.

I chose to revise because it is a course that I have taught and revised several times with limited satisfaction. This course is a difficult “sell” to its students, many of whom have very strict ideas of what genres can be considered literature (usually fiction, poetry, and drama). This is a concern because the class covers American literature from whenever one decides it began

American

through the seventeenth, eighteenth, and early nineteenth centuries. There is little fiction until the mid-eighteenth century, and most of the early genres are non-fiction: letters, diaries, autobiographical narratives, and such. Students remind me of the early cartographers and explorers whose texts are our subjects in class: they see early America through a twenty-first century American lens, as the mapmakers and chroniclers of the new world saw it through their European imaginations. Where the early mapmakers see cannibals, dragons, and “*pays inconnue*,” the students see dogmatic Puritans, oppressors, and exploiters of land and people.

“Pays Inconnue”—Louis Brion de la Tour’s 1779 map of “L’Amerique Septentrionale”
The American Literature Survey I offers a perfect opportunity to broaden students’ horizons, expose them to more genres, and help them to inquire into the connections between culture and literature, focusing on the context in which the texts were written, along with their purposes, audiences, and genres, which helps students understand how authors respond to their cultural moments and conflicts in their texts. Reading the texts can encourage students to ask ques-



tions that will lead them to rich discussions of the cultural moment in which a text was produced. Students can be encouraged to look for places where interpretation is difficult, those centers of gravity or gaps in a text that could be fruitful for further research and discussion.

Charting a course

As I revised this course, I taught it twice: in Fall 2007 and Fall 2008. In Fall 2007, I developed a paper assignment for the course that asked students to practice inquiry, defining inquiry and describing the students’ task as follows:

Inquiry is a questioning state of mind. It is the search for questions to pose without easy answers. These questions are ones that delve into what a text is doing rather than saying, that require one to tolerate complexity and nuance. Inquiry asks readers to think about what our readings of a text say about us as readers—how a reader’s readings can overshadow

descriptions of what the text says. Readers are encouraged to examine our entrenched beliefs and how to try to bracket what we know in order to think about texts created in the past.

The willingness to prolong the exploration of a topic to find the most satisfying answers is essential to inquiry. Research, in this case, is an open rather than a closed process. This means that through research, you discover more interesting questions and avenues of exploration instead of starting with what you think about a topic and finding research that supports your thought. The key is to postpone judgment for as long as possible and to find out as much as possible before coming to conclusions.

This paper should chronicle your exploration of your topic, delaying your thesis (or your conclusions) about what you have found until the end. It should be a map

of your exploration of your topic. We will practice this process in class, and you are free to discuss it with me and your groups. We will also talk about how to research the questions you ask.

When I taught 320 in Fall 2007, in addition to creating small group discussion opportunities to help students practice inquiry, I had students discuss the texts in group blogs on Blackboard. They were to brainstorm interesting questions to research for their inquiry papers by discussing the readings with their classmates on the blogs, and to encourage this, I stipulated that the inquiry questions they posed for their papers had to come from the blogs. This did not work as well as I would have liked for several reasons:

- I formed the groups for the blogs based on students' interests (similar majors, outside activities, etc.), but these groups did not have any relation to the discussion groups that worked together during class time. As a result, students did not form a bond with their online group members and they did not really discuss; instead, they just posted topics about which they thought they might want to write.
- The students did not have enough direction and practice at coming up with questions that would lead to fruitful inquiry. As a result, the papers they wrote were not as successful as they could have been.
- While the students were very active in their groups in class, it was difficult to get them to post often enough and sub-

stantially enough to the blogs. The blogs themselves were very uneven, some being quite interesting and fruitful, others mostly summarizing and paraphrasing from the text.

To remedy these problems and better scaffold the learning activities, when I taught the class in Fall of 2008, I replaced the blogs with discussion preparation assignments. These ten assignments took the place of a midterm and were designed to help students question their assumptions about literature in the time period we were studying. Students completed the assignments about once a week during the first half of the semester. The assignments provided direction in how to practice inquiry and feedback from me and the group members with whom they discussed their responses in class.

Sample discussion preparation assignments

Assignment 3: Choose one of the images (art from the seventeenth and eighteenth centuries depicting "America" as a woman) from the "Images of America" website and discuss it rhetorically. What does it reveal about the assumptions, biases, values, of the culture that produced it? What would it mean for its audience? How can we read these images in a way that reveals attitudes toward the New World during the periods represented? (2 ½–3 pages).

Assignment 7: Read Jane Tompkin's article "'Indians': Textualism, Morality, and the Problem of History" and respond to the following topic (2 ½–3 pages): Jane Tompkins' article looks at historical writings

rhetorically, focusing on the viewpoint of the author and the reader, their cultural assumptions and positions, in a post-structural way. Use her methods on a passage from Briton Hammon's account and a passage from Mary Rowlandson's narrative. Choose a passage from each that allows you to explore the cultural assumptions you make about Hammon and Rowlandson and their experiences to highlight how much of one's interpretation of a text comes from one's assumptions.

I also made some changes to the inquiry paper when I taught the class again in Fall 2008. I changed the way I prepared students to write their inquiry papers by showing them examples of inquiry papers and having individual conferences over their topics and how they might research them. This last change was particularly necessary, because I noticed that the choice of a good topic seemed the best indicator of success on the paper. I encouraged students to make concept maps and bring those with them to the conferences. I also changed the due date for the inquiry paper and made it due at midterm rather than having a floating due date (before students had been able to decide for which of three units they would write the inquiry paper and for which of the three they would write the close reading paper) as the texts in the first half of the semester lend themselves well to inquiry, while texts in the second half of the course lend themselves better to close reading.

You have to walk it to map it
My original inquiry paper assignment for Fall 2007 had the following list of criteria:

A successful paper will include:

- A question derived from the discussions on your group blog
- A narrative that takes the reader through your explorations of your question
- The narrative should have logical transitions and be easily followed
- Research should be well chosen and integrated

- The thesis should be delayed, and your judgments or answers should come at the end
- Effective introduction and conclusion
- Clear, concise academic prose
- Proper MLA documentation and works cited page

It was easy for me to determine what I wanted students to achieve in the paper, but it was very difficult for me to create a rubric to assess their achievement. I did not create the rubric

until the summer of 2008, so I was not able to use it on the papers from Fall 2007. To create my rubric, I began by looking at successful student papers from the Fall 2007 course and worked to describe what made them successful. Some traits of successful papers I focused on were: the complexity of the research question, the organization in terms of a narrative leading readers through research, and a conclusion that ties a topic back to the text that prompted the inquiry.

Inquiry Paper Rubric			
	Developing	Competent	Exemplary
The question that prompts the inquiry	The topic may leave room for exploration, but be a question with a fairly obvious answer.	The question is interesting but might have one clear path of exploration and research, or is a straightforward question that is easily answered.	The question reveals the complexity of a text's context or how a text achieves its purpose rhetorically. The question will lead the writer to inquire deeply and may lead to new questions. The question can lead to many avenues of research.
The narrative of the paper (its organization)	Form of the paper is a thesis-driven academic essay where the thesis is presented in the beginning and the research supports the thesis. The argument is known to the reader and writer from the beginning.	The paper begins with a question and presents an account of the information from the research in a straightforward manner.	The paper is a narrative that takes the reader through the research, explaining what is learned at each step, including how the writer follows detours but is able to finally reach an understanding of the topic's relation to the text.
Quality of research and integration into narrative	Research comes mostly from wikipedia and other Internet sources, or from a single article.	A mixture of Internet and scholarly sources, mostly more general historical material.	Scholarly articles and books that give a deeper analysis of cultural events. May also use other primary texts.
Conclusion (delayed thesis)	No clear connection of the topic back to the text, or does not clearly show how research changed or informed student's reading of the text. Thesis may be present at the beginning rather than the end of the paper.	Conclusion presents a judgment or comment on the original text, but it may not be fully developed. The conclusion could be more general and not explicitly related back to the text.	The conclusion presents an understanding of how the text can be read differently in response to the explorations the writer has undertaken. It has a larger significance in terms of texts or in terms of the text's cultural context.
Clear, concise academic prose	Has errors and stylistic problems, particularly repetition & lack of conciseness.	Few errors or stylistic problems. Sentence structures complex and varied.	Complex sentence structure and word choice complements content. Style helps convey paper's meaning.
MLA documentation	All sources are not documented correctly.	Some formatting errors in citations or works cited.	All sources are correctly documented and formatted.

“Recalculating”—What my GPS says when I do not follow its directions

The results of my inquiry paper rubric (see below) showed that students in Fall 2008 did a good job choosing questions to prompt their inquiry, so I think that the conferences I had with them when they were deciding on their topics were helpful.

In Fall 2007, the class had five sophomores, 13 juniors, and 16 seniors. In Fall 2008, it had 14 sophomores, 14 juniors, and six seniors. When I recorded students’ achievement in 2008, I divided them up according to the level of the students. Then, I realized that the sophomores and some juniors were having significant problems with the narrative structure I asked them to employ (exploring the topic during the paper and delaying the thesis until the end, and returning to how the conclusions affect the

student’s reading of the text). I did not feel it was fair for the sophomores to be disadvantaged, so I allowed everyone the opportunity to revise the paper. In the future, I will provide more sample papers, discuss the organization of the papers, and have students read and comment on drafts of each other’s papers.

Revising this course led to these changes in my teaching:

- I will continue to construct rubrics to assess major course activities, because articulating for myself and my students what I expect has been so useful. It is an unbelievably difficult thing for me to do, but I am hopeful that with experience it might become easier?
- I have created rubrics for other papers I have assigned, and these have helped me describe the qualities I look for in literary analysis. I will be teaching a methods course next fall, and this work will

help me focus on how scholars analyze literature so that I can teach students to analyze, too.

- As I compile information about student progress, I will be able to see improvements and continue to identify factors that could prevent students from being successful so that I can counter them.

Like the authors we read in American literature who struggle to describe their worlds, and the students who read texts and struggle with the difficulties these descriptions present, a lot of my revisions of this class are a result of trial and error. As I navigate possibilities for revising courses and changing the ways I teach, I value more and more the process of mapping the changes, finding clearer indications of what I expect of my students and how I can help them achieve the goals I set for them.

Prof. Lancaster will have a portfolio in CTE’s Gallery in Fall 2009.

Inquiry Paper Response Matrix

		Less than acceptable	Developing	Competent	Exemplary
Question that prompts inquiry	Soph	(no clear question) 2	1	3	8
	Jun	1		4	9
	Sen				6
Narrative (organization)	Soph	(no clear thesis/ organization) 1	4	5	4
	Jun	2	2	6	4
	Sen			1	5
Quality and integration of research	Soph	(research not cited) 1	1	4	8
	Jun		1	6	7
	Sen			1	5
Conclusion	Soph		8	2	4
	Jun		5	7	2
	Sen		1		5
Academic prose	Soph		1	4	9
	Jun				14
	Sen				6
Citations	Soph		3	3	8
	Jun			3	11
	Sen				6

Helping Students Think Like an Academic Scholar of Religious Studies

Serguei B. Dolgopolskii
Religious Studies



In several courses that I teach, I am attempting to transform students from passive consumers of information to active producers of knowledge. While information is easier to learn, the process of creating knowledge is more difficult and novel to students. This narrative covers several semesters and reflects the process of my inquiry and teaching as I attempted to guide students to discover and engage in the scholarly process of knowledge creation in the academic study of religion. The puzzle I am trying to solve is how to build both a course and course work structure so that it models, reflects, and thereby teaches academic protocols of studying religion.

To contextualize my overarching goal across semesters, a brief explanation of the process of knowledge production in the study of religion is required. There is no one universal protocol of academic study of religion, but speaking in very general terms, in the academic study of religion, scholars bring a particular methodology to studying both primary and secondary sources. Whereas *normative* (in particular affiliated or lay) study of religion focuses on the religious norms illustrated by a text as seen in the lens of its institutionally approved interpretation,

and often also entertains a linear understanding of the chronology of events and the historical progression of beliefs, an *academic* study of religion is analytical rather than normative. It revolves around asking and answering questions with arguments developed from a careful study of primary and secondary source material while maintaining the difference between the two. Of critical importance in successfully producing knowledge as an academic would be the ability to read and interpret and evaluate primary sources about religion and to formulate and advance arguments based only on such evaluation. In other words, at an appropriate level, students should be able to analyze primary sources critically, to create evaluative statements about them, to review secondary sources about the same material in a critical way, and to identify differences in methodology and reasoning between their interpretation and that forwarded by the secondary sources.

When I first began teaching at KU, I assumed that students would understand the difference between the academic and normative (affiliated) study of religion with just passing mention in the first class, and that the superiority of an inquiry-based

approach to studying religion by asking questions as opposed to a simplified, lay version of historical approach based on chronology alone would be obvious to students. My experience quickly made clear that this was not the case, and in subsequent semesters I made more and more changes to my courses in order to improve students' abilities to generate knowledge.

Two changes

I modified my teaching in several ways in an effort to engage students in the actual activities of knowledge production, each reflecting the personality and academic level of the course. Changes also had larger impacts on my course design as I discovered the extent of support students needed to engage with course materials in the way I wanted, and ultimately to become engaged in the production of knowledge. I made changes in two areas: the structure of the course, and the assignments/activities I asked students to complete.

Changes in course structure: When I first mentioned the difference between the normative (affiliated) and academic study of religion, I found that simply stating that there was a difference was insufficient to produce a change in student beliefs and behavior related to the study of religion. The first step I took was to provide time and structure to explore the difference between primary and secondary sources. This was difficult for students.

During the Spring 2007 semester of my course REL 107: Living Religions of the West, I spent the first class period discussing the academic study of

religion in detail. I hoped that by making the distinction between the academic and normative (affiliated) study of religion explicit, students would recognize what I was expecting them to do. I did not notice a significant improvement in student performance, however. Many students continued to want me to tell them what to know instead of attempting to critically engage with the course materials in a way that would produce original knowledge.

In order to better help students understand the scholarly approach to studying religion, I then decided to change the course structure to better reflect that process. Thus, during the

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Summer 2007 term for the same REL 107 course, I divided the course into two parts: a study of primary sources and a study of secondary sources. I did this in hope that this structure would more clearly help students understand differences between the two types of sources, and also the differences in how they are used. This was a difficult step for students, but also insufficient to move them toward being more critical in their thinking. I realized that I was bringing more to the discussion than just an appreciation of the differences in types of sources. I had my academic method of inquiry which guided my behavior. Thus, I realized I also needed to make the method obvious and include it in the course structure.

I next taught REL 107 during the Summer 2008 semester, and for that offering, I added a third section to the course structure: an opening unit on the method of scholarly inquiry. I explicitly taught and modeled how scholars approach the reading and interpretation of texts and the construction of arguments. I discussed the importance of disagreement as a signal for deeper study and further questioning rather than stronger attempts at persuasion. I wanted students to appreciate the importance of evaluating the ideas and arguments made by the authors in the texts, rather than focusing on their own personal reactions to the text.

Changes in assignments: In addition to changing the course structure to reflect a scholarly approach to studying religion, I also wanted to engage the students in scholarly activities with my class assignments and projects. I initially began by asking them to complete discussion questions/responses to readings to be submitted to me by email. The level of thought exhibited in the discussion questions was not what I wanted, however, and the private dialogue of email did not seem to produce the level of in-class discussion I desired.

During the Fall 2007 semester I decided to make the reading responses public, so that the entire class could see each response. I also discussed selected responses in class. There was

initially resistance to this: first, because of hesitations about being cited in public, and second because of students' belief that their peers' discourses were not important. I addressed these issues by keeping answers anonymous and by creating a culture and expectation for sharing (e.g., I told them, "This is how it's done in Russia"). Even so, students tried to remain passive. Students wanted me to talk—to tell them "the truth"—so I again had to make explicit the importance of dialogue and discussion as an active part of the academic process. I continue to make reading responses visible and am now exploring using prompting questions to guide students in the creation of their responses. In my upper-level courses, I have even incorporated panel-type discussions of reading responses in a further effort to support students in engaging in a scholarly approach to studying texts.

An additional problem I have faced is that working with ancient religious texts introduces the dilemma of *relevance*—being able to see how the work applies to today's world, or rather to the students' experiences of that world—versus *authenticity*, or an ability to approach an ancient text in its own right. Rather than me providing relevance, in my course REL 602: Topics in Religion: Introduction to Talmud and Interpretation, during the Spring 2008 semester, I introduced the idea of scripts of Talmudic discussion—letting the students stage these discussions in environments and languages of their choosing. Doing that work let students meet the text at the middle ground between the text and terms of experience

which were more familiar and thus more relevant for students.

During that course, students were placed in small groups and assigned excerpts from primary sources of material. They were asked to imagine themselves as one of the members of the original intended audience of the text, or as one of the people participating in the legalistic-theological discussions surrounding the creation of the text. Then, they wrote a script to reflect the dialogue that might have taken place at the time of the creation of the source. After the scripts were written, the groups acted out the scripts in front of the entire class as a starting point for a discussion of the text. To further engage them in the activity, I asked the groups to come to a meeting of one of my lower-level classes and act out the scripts for the students in that class.

Translating the original text into a new context allowed the students to explore the problems and issues of the original writers, often through staging them in contemporary settings, such as coffee shops or car trips to Chicago. It allowed them to see that the creation and interpretation of works like the Talmud was active and involved a dynamic logic (dialogue and the actions of those compiling the texts), rather than a remote and abstract argument. It also highlighted that primary texts were the creation of people who themselves had reasons and opinions shaping their decisions and language.

I found the scripts to provide a useful window into the thinking of the students, helping me see which students were critically engaging with the texts and identifying not only the informa-

tion conveyed, but also the arguments and logic of the text and the likely biases and perspectives of the text's author. Students also seemed to enjoy the activity. Discussion following performances was good. I plan to continue using script-writing activities in this and other courses.

Results

There are two primary places that I look for evidence that the students are beginning to critically engage with the course materials and produce original arguments: the reading responses and the final paper project (both the proposal and the paper itself). Both types of assessments offer the students an opportunity to engage with primary and/or secondary sources in a scholarly way, and I am looking to see at what level they do so. The rubric I use to evaluate their ability to generate scholarly knowledge is located in Table 1 (see page 26). While the actual grades students receive are based on more general criteria (Completion, Is the work informational or argumentative? Does the writer present only original texts, or also critically engage with them?), this rubric represents a more sophisticated account of what I want my students to be able to do.

As I made more changes to my course structure and teaching approach across semesters, more students began turning in discussion questions and papers indicative of their critical engagement with the texts. More papers and reading responses were handed in, which suggested not only that students understood what I expected of them, but also that they were doing it.

Reflection

Presently student grades are based primarily on very general evaluative criteria, but I would like to base grades on the more specific evaluative rubric presented below. Now that students better understand my expectations, and I have provided more opportunities for them to engage with and practice the scholarly approach I want them to use, I feel I can start expecting a higher level of work from them.

I still face difficulties with the lower-level courses; students in those classes are often surprised by the level of my expectations. They often believe they know better what a 100-level course

should look like, and they can resist being asked to do so much work. I also struggle because some students appear to be satisfied with learning only how to write a good discussion question, or a good paper that supports a thesis-statement established even before research begins, but they are not engaging in scholarly inquiry which requires reflection on why they should write or think a certain way.

A teaching goal I have now is to recognize where students are in their learning process. If I can find ways to meet students where they are, I can better help them reach the goals I have for them. I struggle knowing how to reach

middle-level students and am continuing to strive to find additional ways to foster their critical engagement with course materials. I want to help all students recognize the relevance of the texts and to identify and evaluate authors' arguments rather than just agree or disagree with them. I hope to expand the activities that I have seen create such engagement (script-writing and acting them out, panel discussions, polemical discourses, etc.) across all my courses.

For more information about Prof. Dolgopolskii's work, see his course portfolio at www.cte.ku.edu/gallery/visibleknowledge/dolgopolskii.

Table 1. Overarching rubric for evaluating student work

Paper/presentation proposals for final papers will be graded based on academic correctness of the argumentation and writing, not on truthfulness or falsity thereof. Proposals and papers presenting an informed, deliberate, and original argument will yield more credit than papers focusing on collection and/or analysis of information.

Argument outlines should show exactly and under which methodological assumptions your primary and secondary sources are used in your argument. The outline should clearly show to which methodology you subscribe and/or which methodology you re-negotiate in your work. Failure to do so may diminish your credit for the proposal by as much as one letter grade.

A "C" paper shows the writer's opinion on the subject and provides a body of evidence from primary and secondary sources to support it. (For example, "I have an opinion, it is mine, but is also supportable by textual evidence and by 'other' authorities in the field.") The "C" paper has methods, primary sources, and secondary sources in it, but the methods and sources are merely idling there. In a "C+" paper the writer not only shows her opinion but also argumentatively disagrees with another opinion, provided of course that there are methods and sources in place in some way.

A "B" paper shows the writer's ability to form a (perhaps only rudimentary disciplined) independent interpretation of a primary text, to compare that interpretation to that which is found in secondary sources, to find and explain any difference, and take an argumentative stand between the initial interpretation and the one in the secondary sources. The writer argumentatively disagrees with another opinion only after having fairly understood and explained that opinion. A "B+" paper will also explain the difference of opinions or conclusions in terms of methodological assumptions the writer and his secondary sources have used.

An "A" paper will show the writer's ability to use a certain methodological approach in her initial reading of a primary text, to engage in an argumentative exchange with secondary sources, and to conceive a methodological solution might have applied but for some reason did not. The writer can understand and negotiate several different views, and rather than simply adding another one to the mix, learns from limitations of previous understandings.

A simplified version of this rubric is:

C: The writer shows her opinion and argumentatively disagrees with another opinion, provided of course that methods, primary sources, and secondary sources are in place, in some way.

B: The writer argumentatively disagrees with another opinion only after having fairly understood and explained that opinion.

A: The writer can understand and negotiate several different understandings, and rather than simply adding another one to the mix, learns from the limitations of these understandings that she reveals.